

SECTION 09300

TILE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Tile for floor applications.
- B. Tile for wall applications.
- C. Ceramic accessories.
- D. Ceramic trim.

1.02 REFERENCE STANDARDS

- A. ANSI A108 Series/A118 Series/A136.1 - American National Standard Specifications for the Installation of Ceramic Tile (Compendium); 2005.
 - 1. ANSI A108.1a - American National Standard Specifications for Installation of Ceramic Tile in the Wet-Set Method, with Portland Cement Mortar; 2005.
 - 2. ANSI A108.1b - American National Standard Specifications for Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set or Latex Portland Cement Mortar; 1999 (R2005).
 - 3. ANSI A108.1c - Specifications for Contractors Option: Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar or Installation of Ceramic Tile on a Cured Portland Cement Mortar Bed with Dry-Set or Latex Portland Cement Mortar; 1999 (R2005).
 - 4. ANSI A108.4 - American National Standard Specifications for Installation of Ceramic Tile with Organic Adhesives or Water Cleanable Tile-Setting Epoxy Adhesive; 1999 (R2005).
 - 5. ANSI A108.5 - American National Standard Specifications for Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex-Portland Cement Mortar; 1999 (R2005).
 - 6. ANSI A108.6 - American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant, Water Cleanable Tile-Setting and -Grouting Epoxy; 1999 (R2005).
 - 7. ANSI A108.8 - American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant Furan Resin Mortar and Grout; 1999 (R2005).
 - 8. ANSI A108.9 - American National Standard Specifications for Installation of Ceramic Tile with Modified Epoxy Emulsion Mortar/Grout; 1999 (R2005).
 - 9. ANSI A108.10 - American National Standard Specifications for Installation of Grout in Tilework; 1999 (R2005).
 - 10. ANSI A108.11 - American National Standard for Interior Installation of Cementitious Backer Units; 1999 (R2005).
 - 11. ANSI A118.1 - American National Standard Specifications for Dry-Set Portland Cement Mortar; 1999 (R2005).
 - 12. ANSI A118.4 - American National Standard Specifications for Latex-Portland Cement Mortar; 1999 (R2005).
 - 13. ANSI A118.6 - American National Standard Specifications for Standard Cement Grouts for Tile Installation; 1999 (R2005).
 - 14. ANSI A118.7 - American National Standard Specifications for Polymer Modified Cement Grouts for Tile Installation; 1999 (R2005).
 - 15. ANSI A136.1 - American National Standard for Organic Adhesives for Installation of Ceramic Tile; 1999 (R2005).
 - 16. ANSI A137.1 - American National Standard Specifications for Ceramic Tile; 2008.
- B. TCA (HB) - Handbook for Ceramic Tile Installation; Tile Council of North America, Inc.; 2007/2008.

1.03 SUBMITTALS

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturers' data sheets on tile, mortar, grout, and accessories. Include instructions for using grouts and adhesives.
- C. Samples: Three samples of each type, minimum 12x12 inches in size.
- D. Maintenance Data: Include recommended cleaning methods, cleaning materials, stain removal methods, and polishes and waxes.
- E. Maintenance Materials: Furnish the following for VCCS's use in maintenance of project.
 - 1. See Section 01600 - Product Requirements, for additional provisions.
 - 2. Extra Tile: 2 percent percent of each size, color, and surface finish combination, but not less than 10 tiles of each type.

1.04 QUALITY ASSURANCE

- A. Maintain one copy of TCA Handbook and ANSI A108 Series/A118 Series on site.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

1.06 FIELD CONDITIONS

- A. Do not install adhesives in an unventilated environment.
- B. Maintain ambient and substrate temperature of 50 degrees F during installation of mortar materials.

PART 2 PRODUCTS

2.01 TILE

- A. Manufacturers: All products by the same manufacturer.
 - 1. Mission Stone Tile: www.missionstonetile.com
 - 2. American Olean: www.americanolean.com.
 - 3. Crossville Ceramics, Inc.: www.crossvilleinc.com.
 - 4. Substitutions: See Section 01600 - Product Requirements.
- B. Ceramic Mosaic Tile: ANSI A137.1, and as follows:
 - 1. Moisture Absorption: 0 to 0.5 percent.
 - 2. Size and Shape: 1 by 2 inch.
 - 3. Edges: Square.
 - 4. Surface Finish: Unglazed.
 - 5. Colors: As scheduled.
- C. Paver Tile: ANSI A137.1, and as follows:
 - 1. Basis of design: Stonepeak manufactured by Mission Stone Tile.
 - 2. Moisture Absorption: 0 to 0.5 percent.
 - 3. Size and Shape: 12"x24".
 - 4. Thickness: 3/8 inch
 - 5. Surface Finish: Unglazed.
 - 6. Colors: As scheduled.

2.02 TRIM AND ACCESSORIES

- A. Ceramic Trim: Matching bullnose and cove base ceramic shapes in sizes indicated.
 - 1. Applications: Use in the following locations:
 - a. Open Edges: Bullnose.
 - b. Inside Corners: Jointed.

- c. Floor to Wall Joints: Cove base.
- 2. Manufacturer: Same as for tile.

2.03 ADHESIVE MATERIALS

- A. Manufacturers:
 - 1. Bonsal American, Inc: www.sakrete.com
 - 2. Bostik Inc: www.bostik-us.com.
 - 3. Mapei Corporation: www.mapei.com.
 - 4. Substitutions: See Section 01600 - Product Requirements.
- B. Organic Adhesive: ANSI A136.1, thinset bond type; use Type I in areas subject to prolonged moisture exposure.

2.04 MORTAR MATERIALS

- A. Manufacturers:
 - 1. Bonsal American, Inc: www.sakrete.com
 - 2. Bostik Inc: www.bostik-us.com.
 - 3. Custom Building Products: www.custombuildingproducts.com.
 - 4. Substitutions: See Section 01600 - Product Requirements.
- B. Mortar Bond Coat Materials:
 - 1. Dry-Set Portland Cement type: ANSI A118.1.
 - 2. Latex-Portland Cement type: ANSI A118.4.

2.05 GROUT MATERIALS

- A. Standard Grout: Any type specified in ANSI A118.6 or A118.7.
 - 1. Color: As selected.

2.06 ACCESSORY MATERIALS

- A. Uncoupling Membrane: 1/8 inch thick polyurethane matting with three-dimensional grid structure with dovetail shaped cavities and fleece webbing laminated to the underside to provide a mechanical bond to the substrate adhesive (DITRA).
- B. Membrane at Walls: No. 15 asphalt saturated felt.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive tile.
- B. Verify that concrete sub-floor surfaces are ready for tile installation by testing for moisture emission rate and alkalinity; obtain instructions if test results are not within limits recommended by tile manufacturer and setting materials manufacturer.
- C. Verify that required floor-mounted utilities are in correct location.

3.02 PREPARATION

- A. Protect surrounding work from damage.
- B. Vacuum clean surfaces and damp clean.
- C. Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.
- D. Install cementitious backer board in accordance with ANSI A108.11 and board manufacturer's instructions. Tape joints and corners, cover with skim coat of dry-set mortar to a feather edge.

- E. Prepare substrate surfaces for adhesive installation in accordance with adhesive manufacturer's instructions.

3.03 INSTALLATION - GENERAL

- A. Install tile and grout in accordance with applicable requirements of ANSI A108.1 through A108.13, manufacturer's instructions, and TCA Handbook recommendations.
- B. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.
- C. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly. Align floor joints.
- D. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make joints watertight, without voids, cracks, excess mortar, or excess grout.
- E. Form internal angles square and external angles bullnosed.
- F. Sound tile after setting. Replace hollow sounding units.
- G. Keep expansion joints free of adhesive or grout. Apply sealant to joints.
- H. Allow tile to set for a minimum of 48 hours prior to grouting.
- I. Grout tile joints. Use standard grout unless otherwise indicated.
- J. Apply sealant to junction of tile and dissimilar materials and junction of dissimilar planes.

3.04 INSTALLATION - FLOORS - THIN-SET METHODS

- A. Over interior concrete substrates, install in accordance with TCA Handbook Method F113, dry-set or latex-portland cement bond coat, with standard grout, unless otherwise indicated.
 - 1. Use uncoupling membrane under all tile unless other underlayment is indicated.

3.05 INSTALLATION - WALL TILE

- A. Over cementitious backer units on studs, install in accordance with TCA Handbook Method W244, using membrane at toilet rooms.
- B. Over interior concrete and masonry install in accordance with TCA Handbook Method W202, thin-set with dry-set or latex-portland cement bond coat.

3.06 CLEANING

- A. Clean tile and grout surfaces.

3.07 PROTECTION

- A. Do not permit traffic over finished floor surface for 4 days after installation.

END OF SECTION